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for information

Waste Oil Disposal at CWTC

Purpose of the paper

To brief ACE members on waste oil treatment at the Chemical Waste Treatment Centre (CWTC) as requested in the last ACE Meeting held on 24.6.96.

Brief facts about waste oil

Waste oil is a chemical waste and is subject to control under the Waste Disposal Ordinance. It includes spent lubricating oil and other mineral oils like spent transformer oil, spent hydraulic oil, spent cutting oil and spent cooling oil. Spent lubricating oil is produced in the maintenance of most machinery whereas the remaining are generated in other manufacturing or service industries.

Spent lubricating oil has a relatively consistent composition but the other types vary widely in flammability potential, viscosity and calorific value. All types of waste oil are however contaminated and must be disposed of in a proper manner.

Disposal outlets

The annual intake of waste oil by the CWTC for 1994 and 1995 is about 3000 tonnes. Roughly half is spent lubricating oil whilst the remaining half is a mix of the other types. All waste oil sent to the CWTC is disposed of by incineration.

In mid-1995 a private recycling facility for spent lubricating oil re-opened under new management. Only relatively uncontaminated lubricating oil is accepted and a distillation process is used for the treatment. A petroleum base stock for lubrication products is recovered and is sold in the Asian market. For the three months from January to March 1996, the recycler collected 1500 tonnes.

Some spent oil was transported into China as a low grade fuel but this practise had been stopped since 15 May 1996.

Marketability of spent oil

Except for 'clean' spent lubricating oil, waste oils are not marketable. The private recycler is only selectively collecting some spent lubricating oil because any economic value in the other oil types is so low that its collection for recycling is not justified. The waste producers of 'clean' spent lubricating oil pay the recycler \$100-150 for the disposal of one drum (200 litres) of waste.

Treatment at the CWTC

Further clean-up of this waste oil at the CWTC to produce a fuel or other uses is not considered because the waste oil with any residual economic value has already been removed from the market.

Although the waste oil has no residual value it remains a hazard to the environment. The best treatment technology is by incineration. Waste oil destined for incineration has to undergo "fingerprint" tests and is blended with other wastes. The air pollution control for incinerating waste oil is as demanding as for other wastes. Disposal at the CWTC provides proper control for waste oil and it is where stringent emission standards can be set. As in elsewhere, incineration is only acceptable where there is adequate monitoring of all emissions. Close monitoring by EPD staff ensures that there is compliance to all the requirements.

Environmental Protection Department
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